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ABSTRACT

Field research gives graduate students a direct experience in appreciating the differences between doing research and reporting it. This paper reports the field experience provided in a doctoral program at the School of Education at Syracuse University. With the support and assistance of faculty consultants, a structured problem approach was used. Students structured their "instrument-defined" problem. This pre-structuring reduced practice in "problem homesteading" which had to be picked up with other experiences. However pre-structuring the problem had advantages in reducing the burden of faculty support and resulted in a more universally satisfactory experience for the students. Using a survey methodology allowed students to experience data gathering as well as other facets of the process. Requiring indices introduced an understanding of some measurement problems. Requiring individual analyses allowed freedom to show considerable ingenuity, and requesting reports in journal format helped to delineate the process of doing the study from its description. An appendix includes guidelines of the survey project and the questionnaire, which the student had to complete, correct, and administer. (JAZ)

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FIELD EXPERIENCE IN RESEARCH TRAINING:

The Quantitative Research Methods Project in a Two Semester Research Methods Course for Education Doctoral Students

Prepared for a symposium on
Practical Research Experience -- How Can It Be Provided in the Educational Research Course
the 1986 AERA Convention, San Francisco, CA

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Adding the phrase "Learning by Doing" to the title "The Field Experience in Research Training," would make more explicit the implicit theme of this symposium. It is one thing to analyze and critique research studies, -- quite another to carry one out. But the latter prepares for the former. If the hierarchy of our Taxonomy of Educational Objectives is correct, in practicing the skill of synthesis, one also practices the skill of analysis (there is evidence that analysis and synthesis are related hierarchically, Ayers, 1966 and Kroop and Stoker, 1966). Thus, critiquing articles, the common exercise of research courses, economically accomplishes analysis and synthesis simultaneously through having students create and do research studies. Such individuals would probably be good at critiquing articles without even having explicitly practiced this skill.

But anyone who has required such an experience in a research course and has watched students struggle through the various stages of the research process knows its time consuming nature. For the student it can be severely taxing. For the instructor, a

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large course can be overwhelming. A greater variety of research can be encountered and understood if critiquing is practiced directly; hence students are assigned critiques, often to the exclusion of doing research.

GOALS OF THE FIELD RESEARCH EXPERIENCE

But some skills are simply not learned through critiquing; encountering design decisions already made is quite different from having to make them. Just as the accomplished athlete makes a difficult routine look absurdly simple through its polished execution, so the choices of the skilled researcher seem so obvious and right that there doesn't seem much to it. Further, when, in critiquing, students find the author has gone astray, they are "Monday morning quarterbacking," claiming in hindsight that certain choices should have been obvious and preferred. By contrast, for the student choosing de novo among the myriad of design possibilities, the "correct" choice may not be nearly so obvious. Note "correct" is in quotation marks; one person's "correct" design choice is not always another's. Indeed, design choice is an art as much as science and as one selects among the possibilities, one gains an appreciation of:

- the many trade-offs that must be made,
- the inadequacy of resources and the temporizing that results,
- the optimization of many functions such as how much time and energy is to be spent on formulating and reformulating the problem,
- the choice of the right balance between an emphasis on internal versus external validity,
- the possible use of a familiar test or procedure in place of less developed but

possibly better ones to attain audience credibility,

- o the allocation of resources to provide the strongest design and the greatest and most appropriate information yield

(Krathwohl, 1985).

The detail of those decisions is lost to the reader ignorant of a study's developmental history. One can partially remedy this by using a book like Golden (1976) in which they are sometimes revealed. Golden provides sample articles for a variety of research methods, accompanying each with a chapter of comment by one of the article's authors. Many chapters give students a picture of decision-making in action. But the best way to appreciate the optimization process, and the trade-offs involved, is to experience research first-hand.

A related reason for direct experience is to appreciate the difference between doing research and reporting it. Doing research, particularly in the exploratory mode, is a highly creative act which can be described mainly after it has been accomplished. One can talk about techniques that stimulate creativity, but rules to follow, defy us. In the words of Feyerabend (1975) "anything goes."

The reporting of research, however, is a different story. Here the expectations of editors and audience constrain reporting to a logical chain of reasoning which leads to one's conclusion. The various parts of the chain are much of the substance of research courses, but experiencing the development of such a chain brings an appreciation of reality that reading alone does not develop. One realizes that there are collected but unreported data, Events are often reordered into an internally consistent report. The study may be twisted entirely away from its original target by unanticipated findings.

Finally, experiencing research gives practice in that most difficult task for graduate students, dissertation problem formulation -- "problem homesteading," to borrow a term from my colleague, Dr. Louis Heifitz. They spend inordinate time finding a topic and cutting it to size. Through my observations and interviews, I have found problem choice quite complicated. But interviews suggest that early practice facilitates later success.

So there are good reasons for giving a field experience. But what about the amount of time and effort on the part of both student and instructor such a task requires?

THE FIELD EXPERIENCE PROVIDED IN OUR COURSE

We have been wrestling with this problem in a two-semester research methods course which is required of all Ed.D. students and which is an option for Ph.D. candidates. My colleague, Dr. Vincent Tinto has taught it with me the last several years and Dr. Peter Mosenthal joined us this year; I serve as Course Coordinator. We give two field experiences, one in qualitative methods and one in quantitative methods. Since I have had a hand mainly in the latter, I confine this discussion to it.

In a two section course totalling fifty or more students, clearly one of our dilemmas was how to obtain the necessary student and faculty time for carrying out a study. A partial solution involves adding, once-a-week, a one-hour discussion section beyond the three-hour class session at no extra credit. Various faculty serve as consultants to these groups, an experience they have generally found to be enjoyable. With no advance preparation except reading the class handouts, they can keep up with what is going on in the course. We have had little difficulty in recruiting them.

Student group members are determined almost solely by when they can meet. With busy schedules on all sides, this is a complex problem even with small group size -- five to six students plus the faculty consultant. Note I call the faculty, "consultants" rather than "group leaders," because that is their role. After group members become acquainted, they chose a chair from among their number who will help them organize for the tasks. Group members come from all areas of education, a characteristic many find an initial problem, but most come to appreciate.

THE UN-STRUCTED FIELD EXPERIENCE

In contrast to having each student do a study independently, our initial notion was that the group could plan and jointly carry out a study of their choice and invention, dividing the responsibilities and combining their efforts. Thus each could take part of the literature survey and they could trade xerox copies or abstracts and talk about them in the group sessions. Similarly, each could experience gathering data from five to ten subjects. That would give them a sufficiently large body of data to meaningfully analyze.

Our initial efforts were mixed. Some groups jelled beautifully and produced publishable studies. Others tried for so long to find a problem that the time required to operationalize it created crises situations resulting in unpleasant interactions.

We asked the faculty consultants to bring earlier closure to problem formulation. With the students really in charge, we were only partially successful. We might have had better luck if our faculty consultants had worked with us over a period of years, but for several reasons we have changed them every year. Most obvious is the need to spread the load, but equally important is communicating to faculty the nature of the research course.

Required courses must be kept close to what the faculty want them to achieve. Involving a significant portion of the faculty as small group consultants gives them first-hand knowledge of the experiences students are having, the content and skills emphasized, and the students' difficulties. They can then give us valuable feedback from their perspective on how to improve.

THE PARTIALLY STRUCTURED FIELD EXPERIENCE

With enough support and assistance from faculty consultants we hoped to avoid removing the "problem homesteading" from the field experience, but it proved necessary. We did so realizing that another course requirement, development of an individual research proposal would give practice in this skill. For further practice, students presented their initial proposal ideas to the small groups for constructive comment (emphasis has been placed on avoiding discouraging comments in the early sessions). Through this experience, students see their problems played out in the work of the presenting student and they take part in developing, practicing, and learning the positive steps that can prove helpful in such situations. They also take their turn presenting.

For still further practice and guidance, from the beginning of the course we encourage students to keep logs of their idea development and submit them for dialogue with the instructor. Those that do so usually report this is a valuable experience; some of the logs detail quite nicely how the problems develop. Further, learning to keep such a notebook is good research training; unfortunately it is a skill more often practiced in the natural sciences. The demands of the course are such, however, that few students find time to add this extra.

So we curtailed the problem homesteading giving all students a partially structured common problem. It was a sample survey because of the student interest in this method and because it easily allows each student to experience gathering data. Our second trial of the experience worked much better than the first. Using established instruments, groups build their problem around the topic of the questionnaire, modifying it as appropriate to their problem, pretesting it, gathering their data, and discussing methods of analysis. Each student individually analyzes and writes-up the data. The latter is to be not a blow by blow sequence of group actions, but a report of publishable quality.

We point out to the students that this is not unrealistic problem development; problems can start anywhere in the chain of reasoning -- with unusual subjects, a particular treatment, a useful instrument (the law of the "hammer", Kaplan, 1964), and especially with a theory or hypothesis. In this instance, students are starting with an instrument, must construct the problem, and develop a design consistent with it. Since Dr. Tinto's research has been in the area of college drop-outs, with input from us, he took responsibility for choosing the instrument and providing sample references and some structure. The material they received is in the appendix.

It was interesting to see how the students structured their "instrument-defined" problem. Most simply examined the relations of the suggested variables among run-of-the-mill freshmen. But groups exploited their freedom and looked for differences between foreign and native students, work-study and non-work-study students and commuting and residential students.

We insisted that they pre-test whatever they intend to use, since we intentionally built errors into the original questionnaire. If they didn't spot them, pre-testing would not

only find them but would also pin-point problems in items they may have added.

RESULTS OF THE PARTIALLY STRUCTURED FIELD EXPERIENCE

This successful exercise resulted in a large number of excellent papers. But, some groups still had difficulty focusing on a particular slant to the problem. The resulting time-press was, however, nowhere near as severe as formerly. Further, all groups found a reasonable problem formulation which did not always occur when the groups defined their own problems.

Structuring seems not to have reduced learning from their mistakes, a source of concern to us. There are plenty of errors, including common ones. Following return of the papers, we devote class time to providing each group an opportunity to describe what they did and what they learned.

DATA ANALYSIS

One of the most difficult aspects has been to determine how much group analysis to encourage and how much to insist they do individually. Individual ingenuity shows at this stage, some developing quite clever analysis techniques. But while we get creative graphics and comparisons, we ask for no complex statistics. Even in a two semester course, given their highly uneven background, we can teach little more than simple descriptive statistics -- data displays, measures of central tendency and dispersion, simple correlation, and the logic of inference (not how to do specific tests, just the logic). We emphasize getting close to the data rather than depending on the statistics even to the point of encouraging the use of such archaic schemes as edge marked cards (see sample in

the appendix). If they wish to learn computer routines, we ask they use those which give them scatterplots not just statistics. We were surprised at how many voluntarily learned computer packages and are very gingerly considering adding learning Supercalc3 or Minitab to an already jam packed course. Our biggest criticism is how much new material the course already attempts to cover.

IMPORTANT ADDITIONAL GOALS OF THE FIELD RESEARCH EXPERIENCE

The goals set in the first part of the paper for the research experience imply criteria by which the suitability of the experience may be judged and it seems clear how our class meets them. There are, however, two important additions: (1) Every problem set for the students should lead to the fun of discovery. This one did for most students and, given an interesting topic, that is not a hard criterion to meet. (2) This problem met a special criteria we have adopted as an essential characteristic of a class problem that the data contain rewards for students who examine it closely. In this day of computer packages that spit out a wealth of descriptive statistics, it is easy for students to depend on them to interpret the data. This year's problem was particularly rewarding if students studied the data not just the statistics. They became quite excited when some discovered that their scatterplots neatly showed contingent conditions.

If we think about a cause as consisting of the necessary and sufficient conditions, then we can distinguish four sets of conditions:

Possible Combinations of Necessity and Sufficiency.

		Cause is sufficient for the effect: Yes	Cause is sufficient for the effect: No
Cause is necessary for the effect	Yes	Only a single set of conditions	A contingent condition
	No	An alternative set of conditions	A contributing condition

(For further explanation, see Krathwohl, 1985, pp. 218 & ff)

Both contingent and contributing conditions hide behind low Pearson product-moment correlations. For example, the scatterplot from the data of Ms. Susan Allen (Figure 1) shows the relation between a social satisfaction index and the size of community of origin for freshmen students. In this scatterplot, dissatisfaction is contingent upon coming from a small community, but obviously satisfaction may also be gained as a result of other factors which apparently compensate for whatever coming from a large community gives one. The whole upper right corner, as indicated by the diagonal line, is devoid of cases. But they are scattered across the lower left-hand corner, a pattern typical of contingent relations. For this urban university, the larger the community of origin, the more likely the student has a high satisfaction index, but the reverse is not true. As the size of the community decreases, factors other than size apparently determine level of satisfaction, so it is unpredictable.

We are careful to emphasize in class that such post hoc interpretations must be

cross validated. In addition we also note that the researcher is in a better position to know and interpret the data than anyone else. It is from this process that discoveries are often made.

Contingent conditions will be found wherever a given condition must be met prior to a next condition. This is the case with all so-called "entry behaviors" in programmed instruction or mastery learning. Since such contingent conditions show up as triangular plots or as triangular plots set on top of a rectangular one, our conventional correlational statistics fail to describe the relationship adequately (Ibid., p. 221 & ff). Thus careful interpretation of the scatterplot is necessary. But when the relationship is discovered and understood, the result is a reinforcement of this kind of close data analysis. The presence of contingent relations, like this one, will be criterion to be met by the problems we set for future students.

THE INDEX REQUIREMENT -- THE ILLUMINATION OF ANOTHER RESEARCH ASPECT

The index of social satisfaction in Figure 1 was developed by the student in response to the project instructions. We asked them to construct indices of student experiences and/or satisfactions. Although as indicated in the last paragraph of the second page of the instructions, this simplifies the problems of analysis, we had a second agenda. We wanted students to encounter the problem of determining the explicit and implicit weightings of various items as they entered into the combination that constitutes an index. Having already given them some instruction and practice on conceptual analysis earlier in the course, this experience gave further experience as they defined the nature of "social satisfaction." Further they encountered the problem of operationalizing the

construct. Accustomed to accepting the composition of established tests, we wanted the students to face the judgments involved in choosing what kinds of items to include, how many, and how each should be weighted. More of them understood explicit weighting in terms of multiplying an item response by a weight than implicit weighting, for instance, in terms of the number of items measuring the same aspect of the construct, or in terms of its variance or its correlation with other items. The latter two may be beyond what we can expect, but not the first two.

SUMMARY

In summary, we have had some success in using a structured problem for the quantitative field experience. Some problems clearly provide better experiences and are more reinforcing of the students' efforts than others. The one we picked had rewards for those who became intimately familiar with the data rather than relying solely on statistics, a criterion we are inclined to think all such problems should meet. Pre-structuring the problem reduced practice in "problem homesteading" which had to be picked up with other experiences. But pre-structuring the problem had advantages in reducing the burden of faculty support and resulted in a more universally satisfactory experience for the students. Using a survey type methodology allowed students to experience data-gathering as well as the other facets of the process. Requiring indices introduced an understanding of some measurement problems. Requiring individual analyses allowed freedom to show considerable ingenuity and requesting reports in journal format helped to delineate the process of doing the study from how it is described. We have no doubt we have considerable room for improvement, but we have made considerable progress from where we started.

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APPENDIX

School of Education
Syracuse University
Syracuse, New York

EDU 787: RESEARCH CORE

SURVEY PROJECT

Attached you will find a survey questionnaire, in draft form, which is intended to ascertain to what degree and in what fashion freshman year experiences are related to the intention to leave Syracuse University. But it is not a complete nor entirely correct instrument. Your task will be to complete and correct the instrument, administer it to a population of students, and analyze the resulting data. To do so you will have to attend to the following tasks:

1. COMPLETE THE BACKGROUND INFORMATION SECTION. Three questions are already written. Write at most seven (7) more questions whose purpose it is to ascertain the background attributes of the target population. Before you write the questions, you will have to decide who the target population will be and what pieces of information should be obtained about the characteristics of that population. Though there may be many pieces of information you may wish to collect, not all will be central to your concerns. For instance, if you are interested in how the experiences of males and females or of traditional and adult students students are related to the intention to leave, you will have to ask about the sex and/or age of the respondent. In doing so, you hope to be able to answer the question not only how experiences differ among different students but also how they may be differentially related to the intention to leave.

2. COMPLETE EXPERIENCE AND SATISFACTION SECTIONS. Given your reading of the literature (see attached reference list), you may decide to add several additional questions to the second and third sections on student experiences and satisfactions. If and when you do so, please make sure you first consider why the requested information is necessary and in what fashion that information may be best obtained (e.g. open-ended or closed-ended form, varying types of scales, etc.).

3. PILOT TEST SURVEY INSTRUMENT. The key to the success of any survey instrument is pilot testing. It enables the researcher to check not only on possible errors either in form or in interpretation, but also for areas for additional questionning. In this instance, the second (experiences) and third (satisfactions) sections of the questionnaire have several errors which need correcting. Furthermore,

they cover some, but not all, of the possible areas of inquiry on the character of student experiences. Your task is to pilot test the full instrument and ascertain if any changes and/or additions need be made before it is administered. Here let the several persons you choose for pilot testing act as a small panel of "experts" and advise you on how the instrument can be improved to better obtain the information needed to answer the research question.

4. SELECT TARGET POPULATION AND METHOD OF SAMPLING. Decide on the target population and the procedures you will employ to reach that population. Note that the decision on target population and the completion of the background section may be related in that certain choices in population and procedures (e.g. stratified sampling) may obviate the need for certain types of background information (e.g. you choose to survey females only).

5. WRITE FINAL VERSION OF SURVEY INSTRUMENT. Given the results of the prior tasks, you must finalize the questionnaire and write an introduction to it which helps the respondent understand both the purposes of the instruments and the conditions under which it will be used (e.g. confidentiality).

6. ADMINISTER THE INSTRUMENT AND COLLECT THE DATA. Administer the instrument and compile the data. In this instance, you may choose to have each member of the group obtain ten to fifteen separate questionnaires or allocate tasks such that one or two collect all the data which are then partitioned among the group for analysis. However collected, the data should be compile, coded and put into a form such that data analysis can be performed.

7. ANALYZE THE DATA. Carry out simple univariate statistics to describe the data (e.g. means, standard deviations, etc.). Then perform a selected series of cross-tabulations (correlations are optional) in order to ascertain how experiences are, for different types of students, related to the intention to leave. As part of that analysis you may want to use the collected data on vocational/social/academic orientation of students. Those data, frequently used elsewhere, provide insight into the orientations of students regarding the importance of different areas of endeavor. More importantly, they sometimes prove to partially explain how experiences come to influence decisions to leave.

To simplify the task of analysis, you should also attempt to construct an index of student experiences and/or student satisfactions. Generally speaking an index is a single measure which best captures a complex concept which is normally measured by a range of separate items. The task here is to decide how (and why) you will combine the separate measures of experience and/or satisfaction so as to produce a single measure which can then be used in the analysis.

8. WRITE A PROJECT RESEARCH REPORT. Together with a brief literature review (taken from the appended reference list), write up a project research report. Though you may combine your data and work together on the data analysis and literature review, each person should write a separate report on the project. You may, however, ease the task by asking different members of the group to read different references. The combined readings may then be used by each member of the group for the literature review of each report.

Please note that your reports should contain a closing section on what things you would do differently were you to do the research again. In other words, you should speak to the question of how the research project could be improved the next time it is carried out (please omit the possibility the recommendation that the project never be carried out in the future!).

Dr. Vincent Tinto

FRESHMAN QUESTIONNAIRE

I. BACKGROUND

1. I am (please circle) ..... Male Female

2. What is your current status? ..... New Student Transfer

3. From which type of community do you come? (Circle one)
   a. Rural farm or country
   b. Small town (less than 10,000)
   c. Large town (10,000 to 50,000)
   d. Suburb of a city
   e. City (more than 50,000)

4. What is the highest level of formal education completed by each of your parents? (Circle one in each column)

	Mother	Father
a. Grades 1 - 9	(1)	(1)
b. Some high school	(2)	(2)
c. High school graduate	(3)	(3)
d. Some college	(4)	(4)
e. Bachelor's degree	(5)	(5)
f. Graduate degree	(6)	(6)

II. EDUCATIONAL EXPERIENCES

For each of the following educational situations or activities, please indicate the extent to which you have participated in those activities during the last year (1 = very little/none, 2 = some, 3 = more than most other first year students, 4 = a great deal).

	Amount of Participation			
a. Meet with faculty outside class	(1)	(2)	(3)	(4)
b. Meet with staff (e.g. advisor, counsellors)	(1)	(2)	(3)	(4)
c. Discussed serious topics with other students outside class	(1)	(2)	(3)	(4)
d. Initiated an appointment with a faculty member or staff member to gain needed information	(1)	(2)	(3)	(4)
e. Attended a cultural activity sponsored by the university or a student group	(1)	(2)	(3)	(4)
f. Used the library to gather materials and information	(1)	(2)	(3)	(4)
g. Participated in an extracurricular activity	(1)	(2)	(3)	(4)
h. Attended special lectures or exhibits	(1)	(2)	(3)	(4)

III. EDUCATIONAL SATISFACTIONS

How satisfied are you with your experience at Syracuse University thus far? For each of the following educational or social activity, indicate your level of satisfaction by circling the appropriate number.
(1 = very unsatisfied, 2 = somewhat unsatisfied, 3 = somewhat satisfied, 4 = very satisfied).

	Level of Satisfaction			
a. Quality of teaching	(1)	(2)	(3)	(4)
b. Frequency and quality of contact with faculty	(1)	(2)	(3)	(4)
c. Frequency and quality of contact with staff	(1)	(2)	(3)	(4)
d. Quality of cultural life	(1)	(2)	(3)	(4)
e. Quality of social life	(1)	(2)	(3)	(4)
f. Quality of library	(1)	(2)	(3)	(4)
g. Quality of residence halls	(1)	(2)	(3)	(4)
h. Friendliness of students	(1)	(2)	(3)	(4)
i. Friendliness of faculty and staff	(1)	(2)	(3)	(4)
j. Intellectual progress thus far	(1)	(2)	(3)	(4)

IV. INTENTION TO LEAVE

1. At this time, do you plan to return to Syracuse University next year?

   (a) Yes, definitely
   (b) Yes, maybe
   (c) No, maybe
   (d) No, definitely

2. If you do not intend to return to Syracuse next year, could you please indicate why.

---

3. If you do not intend to return to Syracuse next year, what do you intend to do? (Circle as many as applied).

   (a) Transfer to another four-year institution.
   (b) Transfer to a two-year college.
   (c) Obtain employment.
   (d) Other (please explain)_____

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PAGE 1

1. Background
1,3,4,-1. Male
2. Female
1,2,4,-3. Rural
4. Small (town, not suburb
3. Small town, suburb
6. Large town, not suburb
7. Large town, suburb
8. City
1,3,M,4,-9. Grades 1-8
10. Some high school
11. High school grad.
12. Some college
13. Grad. work
14. BA/BS
M
1,3,F,4,-16. Grades 1-8
17. Some high school
18. High school grad.
19. Some college
20. M
21. BA/BS
22. Grad. work
1,4,4,-23. Native American
24. Hispanic
25. Asian
26. Arabic
27. Black
28. White
29. Other
1,3,4,-30. Less than 100
31. 100-199
32. 200-299
33. 300-399
34. 400-499
35+
1,4,4,-36. 90-100, A
37. 80- 89, B
38. 70- 79, C
39. 60- 69, D

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7.a.-40. Music, Band, Orch.,etc.
b.-41. Interscholastic sports
c.-42. Dramatics
d.-43. Language club
e.-44. Yearbook Newspaper
f.-45. Other Part time job/activity e/w
8.a.-46. Extremely committed
b.-47. Somewhat committed
c.-48. Mildly committed
d.-49. Committed, not necess.
9.a.-50. Extremely committed
b.-51. Somewhat committed
c.-52. Somewhat uncommitted
d.-53. Uncommitted
10.a.-54. 1st choice
b.-55. 2nd choice
c.-56. 3rd choice
d.-57. 4th choice

A = 2.71
B = 3.71

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11. Experiences
11.1A.1.-58. Never (Attendance)
2.-59. Seldom
3.-60. Often
4.-61. Always
11.1B.1.-62. Very dissatisfied
2.-63. Dissatisfied
3.-64. Satisfied
4.-65. Very satisfied
11.2A.1.-66. Never (Meetings)
2.-67. Seldom
3.-68. Often
4.-69. Always
11.2B.1.-70. Very dissatisfied
2.-71. Dissatisfied
3.-72. Satisfied
4.-73. Very satisfied
11.3A.1.-74. Never (Facilities)
2.-75. Seldom
3.-76. Often
4.-77. Always
11.3B.1.-78. Very dissatisfied
2.-79. Dissatisfied
3.-80. Satisfied
4.-81. Very satisfied
11.4A.1.-82. Never (Friends)
2.-83. Seldom
3.-84. Often
4.-85. Always
11.4B.1.-86. Very dissatisfied
2.-87. Dissatisfied
3.-88. Satisfied
4.-89. Very satisfied
11.5A.1.-90. Never (Social/Cult.)
2.-91. Seldom
3.-92. Often
4.-93. Always
11.5B.1.-94. Very dissatisfied
2.-95. Dissatisfied
3.-96. Satisfied
4.-97. Very satisfied
11.6A.1.-98. Never (Extra-curr.)
2.-99. Seldom
3.-100. Often
4.-101. Always
11.6B.1.-102. Very dissatisfied
2.-103. Dissatisfied
3.-104. Satisfied
4.-105. Very satisfied
11.7A.1.-106. Never (Residence)
2.-107. Seldom
3.-108. Often
4.-109. Always
11.7B.1.-110. Very dissatisfied
2.-111. Dissatisfied
3.-112. Satisfied
4.-113. Very satisfied
11.8.1.-114. Very dissatisfied (Intellect)
2.-115. Dissatisfied
3.-116. Satisfied
4.-117. Very satisfied

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111. Intentions
111.1.a.-118. Definitely return
b.-119. Probably return
c.-120. Probably not return
d.-121. Definitely not return
111.2.a.-122. Very important
b.-123. Somewhat important
c.-124. Not a factor
111.3.a.-125. Transfer-4 yr.
b.-126. Transfer-2 yr.
c.-127. Obtain employment
d.-128. Other _____
111.4. Reasons: _____

Relationship of Size of Community to Satisfaction
(measured by Satisfaction Index)

Satisfaction Index	Rural	Small Town (not suburb)	Small Town (suburb)	Large Town (not suburb)	Large Town (suburb)	City
.5-.9	0	0	0	0	0	0
1.0-1.59	0	0	0	0	0	0
1.6-1.99	0	1	0	0	0	0
2.0-2.59	1	0	1	1	0	0
2.6-2.99	0	2	3	0	0	0
3.0-3.59	2	5	4	2	10	1
3.6-4.0	0	1	0	1	3	2
Column Means	2.9	3.0	2.4	3.1	3.4	3.6

Figure 1